^{58}Ni(α,t) 1970Ro22,2013Sc06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 151, 1 (2018)	1-Apr-2018

Other: 1983Sh09.
1970Ro22: Eα=44 MeV. Measured $\sigma(\theta)$ with ΔE-E 3-counter telescopes, FWHM=80-120 keV, θ(C.M.)=13°−63°.
2013Sc06: Eα=38 MeV. Measured σ(5°) with split-pole spectrograph FWHM=64 keV. Deduced spectroscopic factors.
For t spectrum encompassing continuum region, see 1983Sh09 (Eα=172.5 MeV).

^{59}Cu Levels

E(level)[†]	J$^\pi$[‡]	L[#]	C^{2}S′[@]	Comments
0.0	3/2$^-$	1	1.67 *17*	C^{2}S′=1.0 (1970Ro22).
490	1/2$^-$	1	0.75 *8*	C^{2}S′=0.35 (1970Ro22).
910	5/2$^-$	3	3.66 *37*	C^{2}S′=3.4 (1970Ro22).
1390	7/2$^-$	3	0.93 *14*	C^{2}S′ ∼1.5 (1970Ro22).
2324	3/2$^-$		0.18 *3*	E(level),J$^\pi$: From Adopted Levels.
2360	5/2$^+$	2	0.22[&]	
2690	7/2$^-$	3	≈0.42[&]	
3030	9/2$^+$	4	2.7[&]	
3130	3/2$^-$		0.31 *5*	
3410	5/2$^+$,7/2$^-$	(2),(3)	0.11,0.35[&]	
3550	7/2$^-$	3	≈1.7[&]	
3700	9/2$^+$,7/2$^-$	(4),(3)	0.14,0.41[&]	
3900	5/2$^+$,3/2$^-$	2+1	0.23+0.64[&]	L=1 component may be T$_>$ state.
4090	3/2$^-$,5/2$^-$	1+3		
4300[a]	5/2$^-$,1/2$^-$	3+1		
6900[a]	9/2$^+$	4		

[†] From 1970Ro22; ΔE=10-80 keV.
[‡] Corresponds to orbital assumed for calculation of C^{2}S′.
[#] From 1970Ro22.
[@] C^{2}S′=(2J$_f$+1)C^{2}S from 2013Sc06, except otherwise noted. 2013Sc06 note uncertainty 10% (for strength >∼0.2), 15% (for strength between 0.3 0.2), 25% (for strength <0.03) added to a constant value of 0.005. C^{2}S′ values from 1970Ro22 listed in column and comments section.
[&] From 1970Ro22.
[a] Proposed T$_>$ state (1970Ro22).